

**SECTION 01568**  
**CONSTRUCTION SAFETY**  
**PART 1 - GENERAL**

**1.1 DESCRIPTION**

- A. This section specifies requirements to establish a practical, sound, and effective program for the prevention of construction accidents, and to assign specific responsibilities to Contractors for program compliance.
- B. Contractors need to comply with all requirements in the MBTA Commuter Rail Construction Safety Directive, dated August 12, 2022, which is part of this specification and is attached as an appendix to this section.
- C. Contractors and their supervisors must control hazardous activities and conditions within their respective areas of contract responsibility.
- D. The Contractor shall conduct a pre-construction kick off safety meeting on site in coordination with the MBTA to discuss contract specific hazards and Safety Supervisor requirements.
- E. Attention of the Contractor is, specifically directed to the General and Supplementary Conditions of this Contract, which shall be made a condition of each subcontract entered pursuant to the Contract. Further, the Contractor and any subcontractor shall not require any person employed in performance of the Contract to work in surroundings or under working conditions which are unsanitary, hazardous, or dangerous to health or safety, as determined under construction safety and health standards (Title 29, Code of Federal Regulations, Part 1518, Published in the Federal Register on April 17, 1971) promulgated by the United States Secretary of Labor, in accordance with Section 107 of the Contract Work Hours and Safety Standards Act (83 Stat. 96). This contract will require all contractors and subcontractors to comply one hundred percent (100%) with OSHA's fall protection standard.
- F. The Authority may stop any work that it considers to be unsafe.

**1.2 SUBMITTALS**

- A. All safety submittals must be approved by the MBTA Safety Department prior to the start of construction.

- B. Safety and Health Plan: The contractor shall, submit for approval to the MBTA, a detailed operational project-specific Safety and Health Plan.

- C. As part of the Safety and Health Plan submittal, Contractors must submit their Federal Railroad Administration (FRA) Approved Drug & Alcohol Plans as well as FRA Approval Letter.
- D. Safety Supervisor: The Contractor shall submit the resume of the qualifications and work experience of the designated Safety Supervisor proposed for assignment to the Project prior to the start of construction. No construction work shall begin until the project Safety Supervisor has been approved by the MBTA.

#### SAFETY SUPERVISORS:

1. Prior to the start of construction, the Contractor shall submit to the MBTA a proposed list of Safety Supervisors (full time and alternates), including names, experience, and qualifications. No work at the job site shall begin until the MBTA Safety Department has approved the Contractor's Safety Program and Safety Supervisors.
2. The Contractor shall have a full-time (all working hours/one each shift) Safety Supervisor, whose sole responsibility is on-site safety management. In the absence of the Safety Supervisor (e.g. vacation, sick leave, short term shift work not exceeding two weeks), the Contractor must assign a full-time Authority approved Alternate Safety Supervisor to this contract. All Alternate Safety Supervisors must be a Class I or greater (see Qualification Table below).
3. Contracts with more than one physical location shall require a Safety Supervisor for each location provided:
  - a. The locations are more than a 15-minute drive apart under normal traffic conditions.
  - b. The MBTA determines the hazards involved require a dedicated Safety Supervisor for each location.
4. The Contractor's full-time Safety Supervisor shall have thorough knowledge of construction safety and OSHA regulations. If, in the opinion of the MBTA Safety Department, the Contractor's Safety Supervisor is not effective in carrying out the assigned duties as described below, the MBTA Safety Department may request, in writing, that the Contractor replace the Safety Supervisor.
5. The duties of the Safety Supervisor shall include but not be limited to the following:

- a. Maintenance of the Contractor's Safety Program
- b. Enforcement of safe practices
- c. Complete daily safety inspections of the job site and contiguous public areas and take any corrective actions to eliminate unsafe conditions.

- Inspections must be documented and made available to the MBTA upon request for the duration of the project.
- d. Establish and implement a project safety training program for supervisors and employees as applicable to their job.
  - e. Conduct regular project safety meetings.
  - f. Review accident and investigation reports, and initiate corrective action to prevent reoccurrence.
  - g. Assist Foremen in accident investigations.
  - h. Establish incentive programs designed to recognize individual employee safety efforts and contributions towards improved safety.
  - i. Prepare a Safety Audit Checklist and complete the checklist each week during construction. The completed Audit Checklists shall be submitted to the Authority weekly.
  - j. The proper use of safety equipment and Personal Protective Equipment (PPE)
  - k. Other such activities as may be required by OSHA and the MBTA to maintain job safety and accident prevention.
6. The Safety Supervisor shall not be replaced or reassigned without the written approval of the MBTA Safety Department. A transition period of two weeks shall occur when Safety Supervisors are reassigned. Vacancies in these positions must be filled within two weeks. Safety Supervisors shall be assigned full-time to the contract and shall not be utilized concurrently on any other MBTA contract or any other projects outside the MBTA.
7. The timeline for full-time Safety Supervisor coverage must be approved by the MBTA Safety Department. Contractors must receive approval from the MBTA Safety Department in writing for any work to be performed without the full-time Safety Supervisor present on site during work activities (i.e. punch list items following substantial completion).
8. The Safety Supervisor needs to be on the project site when major work tasks are being performed. During work periods when the Contractor is not performing contract work or when there is little to no risk involved with the planned work (eg. painting), the Safety Supervisor can be absent from the project site with permission from the MBTA Safety Department.
9. All MBTA approved Safety Supervisors must have the following qualifications:

- a. Specialized safety training relevant to the contract.
- b. OSHA 30hr certificate or instructor level 500 course
- c. Demonstrated ability to create and maintain a safe work environment.
- d. Working knowledge of safety regulations and hazard control measures.
- e. Demonstrated ability to conduct safety training and provide safety briefings/toolbox talks.

- f. Working knowledge of hazardous work procedures specific to the contract (confined space, hot work, fall protection, etc.).
  - g. Physically able to perform the job.
  - h. Evidence of participation in an on-going general construction safety program.
10. Contractor Safety Supervisors shall be classified into three (3) levels with their qualifications based upon the extent of their construction safety supervisory experience and capabilities. The Contractor shall classify each Safety Supervisor and Safety Supervisor Alternate in the Safety Supervisor submittal, however the MBTA Safety Department reserves the right to adjust the Contractor's classification. Qualifications for each classification are outlined in the table below:

Qualification	Supervisor Classification Level		
	Class I	Class II	Class III
<b>Minimum years of safety experience</b>	2	5	7
<b>Minimum years of full-time on-site construction safety experience</b>	0	3	5

11. The level of classification required for assigning Safety Supervisors for each contract shall be determined based on guidelines established by the MBTA Safety Department, which shall in turn be based on contract characteristics outlined in the table below. The Contractor shall classify the contract level, which determines the classification of Safety Supervisor required, however the MBTA Safety Department reserves the right to reclassify the contract. A risk assessment may be submitted by the Contractor to help justify the intended classification level for the contract.

Contract Characteristics	Contract Classification Level		
	Class I	Class II	Class III
<b>Complexity level</b>	Low	Medium	High
<b>Dollar value range</b>	< \$10 million	\$10 - \$100 million	\$100 million +
<b>Risk level</b>	Low (low voltage electrical, fall	Medium	High (high voltage, confined space,

	protection)		Hazmat)
<b>ROW Access</b>	None	Occasional	Extensive
<b>Examples</b>	Station repair, platform rehab, new duct installs	Rail replacement track work with outages/diversions	New facilities, new stations, line extensions

E. Industrial Industry Records: Prior to start of work, the Contractor shall submit their injury/illness records for the previous 3 years.



## **PART 2 - PRODUCTS**

None

## **PART 3 - EXECUTION**

### **3.1 EMERGENCY TELEPHONE NUMBERS**

- A. To ensure that emergency actions are promptly taken, Contractors shall post emergency telephone numbers in conspicuous places.

### **3.2 ORIENTATION PROGRAM**

- A. The Contractor shall establish and maintain an orientation program for new employees which shall include:
  - 1. For each individual the hazards present in their work assignment and in the general area in which he will be working.
  - 2. Personal protective equipment required.
  - 3. Instruction in the proper procedure for reporting unsafe job conditions which he/she may encounter.

### **3.3 OSHA**

- A. The Contractor shall comply with the OSHA 1926 Construction Safety Standards that apply to the project work. The Contractor shall meet the reporting requirements, and employers with eleven (11) or more employees must meet recordkeeping requirements.
- B. All Contractor and Sub-Contractor personnel shall possess an OSHA 10 Hour Certification card when working on the project site.
- C. All fatality cases and/or serious accidents and illness shall be reported to OSHA immediately by phone to an Occupational Safety and Health Area Office. Employers must report immediately all blasting accidents.
- D. Part of the OSHA requirements is that each employer must post in a prominent location the "Safety and Health Protection on the Job" poster. The poster briefly states the intent and coverage of the Act. Failure to post this document is a citable offense under the Act.

### 3.4 REQUIRED TRAINING

- A. All workers (including subcontractors and vendors) employed by the Contractor who work on or around the Authority's rapid transit system (including stations, maintenance facilities, track area ROW on and /or adjacent to the power traction system, etc.) shall be required to attend MBTA's ROW training. Contractors, subcontractors, and vendors must take the initial 8-hour training if they have never taken the training before. If they have taken MBTA ROW training, they need to attend a refresher training every 2 years. Workers are required to carry their MBTA ROW certification cards with them at all times while on site. All costs for this training shall be at the sole expense of the Contractor. To register for ROW safety training, contact:

Supervisor and Chief Rules Examiner of  
Training Cabot RTL Training  
275 Dorchester Avenue,  
2<sup>nd</sup> Floor 617-222-5377

- B. For projects affecting the MBTA Commuter Rail system, all workers (including subcontractors and vendors) employed by the Contractor who come within the limits of the Commuter Rail ROW, must have completed Roadway Worker Protection (RWP) Class. A certification from this class is valid for one (1) year from date of issue. Workers are required to comply with the MBTA Commuter Rail operator's safety requirements throughout the entire construction period. The RWP class will be provided under the jurisdiction of the MBTA Commuter Rail operator, who will be responsible to ensure that the Contractor, subcontractors, and respective employees have attended the RWP class. This training class must be retaken annually. Workers are required to carry their RWP certification cards with them at all times while on site. All costs in connection with complying with the MBTA Commuter Rail safety requirements will be at the sole expense of the Contractor.
- C. All workers (including subcontractors and vendors) employed by the Contractor who work on or around those portions of the Authority's Commuter Rail system (including stations, trackways, maintenance facilities, and electrification facilities), or other railroad facilities, that are operated by Amtrak, Pan Am Southern, Pan Am Railways, CSX Transportation, Mass Coastal Railroad, Bay Colony Railroad, the Providence and Worcester Railroad, or other railroad entities shall comply with the RWP training policies, and attend training classes, as required by the respective operating railroad. The Contractor is obligated to notify the Authority's project personnel of any new

workers (including subcontractors /vendors) that are entering the site and ensure they are complying with necessary RWP Training. All costs for this training shall be at the sole expense of the Contractor.

- D. The Contractor shall certify that all employees to be employed at the worksite shall have successfully completed a course in construction safety and health. The course must be approved by the United States Occupational Safety and Health Administration, and it must be at least 10 hours in duration per MGL 30.39S. The Contractor shall submit documentation of successful completion of said course with the first certified payroll report for each employee.

### 3.5 PROSECUTION OF THE WORK

- A. The Contractor shall take all reasonable precautions in the performance of the work to protect the safety and health of its employees and members of the public and shall comply with all applicable MBTA, Local, State and Federal safety and health regulations and associated reporting requirements.
- B. The MBTA shall notify the Contractor in writing of any non-compliance and of the corrective action required. This notice, when delivered to the Contractor or the Contractor's representative at the site of the work, shall be deemed sufficient notice of the non-compliance. The contractor shall immediately take corrective action required after receiving the notice. If the contractor fails or refuses to take corrective action promptly, the MBTA may, without prejudice to other legal or contractual rights, issue an order stopping all or part of the work; and may subject the contractor to safety violation assessments as deemed appropriate by the MBTA. Resumption of work may be issued by the MBTA Safety Department.
- C. The Contractor shall maintain accurate data on all accidents and incidents occurring under this contract and report this data in a manner prescribed by the MBTA.
- D. The Contractor shall be responsible for all its lower-tier sub-contractor's and vendor's compliance.
- E. Contractor management shall make a commitment for accident prevention and fire prevention. Safety shall take precedence over schedule and production. Enforcement action is mandatory.
- F. The Contractor shall notify the MBTA at least two (2) days prior to bringing in any hoisting equipment (cranes, etc.) on the Authority's

property. Hoisting equipment must be inspected before being used on the work site. For any work involving hoisting equipment with the potential to foul the MBTA Right of Way (ROW), the following information must be submitted at least two (2) business days prior to any hoisting activity:

1. Scope of work (purpose of work, hours of operation, location, etc.)
2. Pick plan (max pick weight must be under 67% of hoisting capacity\*)
3. Equipment specifications
4. Most recent 3<sup>rd</sup> party crane inspection/certification
5. Operator's driver's license
6. Operator's hoisting license
7. Operator's medical certificate

\* Critical picks (> 67% of crane capacity) must be coordinated with the MBTA well in advance and the Contractor must demonstrate why each critical pick cannot be performed with picks under 67% of crane capacity.

G. The Contractor shall assume full responsibility for the safety of all work. The Contractor shall perform work in a manner that will ensure the safety of personnel and the work; and prevent personnel and equipment from being exposed to hazardous or potentially hazardous conditions. All work in the construction of the project shall comply with the requirements of the U.S. Department of Occupational Safety and Health Administration (OSHA) provisions, as well as those of State and local regulations. Safe breathing levels must conform to the Massachusetts Department of Environmental Protection (DEP) standards. In case of conflict of regulations, the most stringent regulations shall apply.

H. The Contractor shall provide at the site such equipment and medical facilities as are necessary to supply first-aid services to any person who may be injured in the progress of the work. At least one individual member of the contractor's staff, properly qualified with current certification (Red Cross or equivalent) in basic first aid and Cardiopulmonary Resuscitation (CPR), must be continuously present, on the site at all times when work is in progress. This individual must also have a general knowledge regarding blood borne pathogens. First-aid equipment shall be complete in all respects. The Contractor shall also have standing arrangements for the removal and hospital treatment of any employee who may be injured or who may become ill.

I. The Contractor shall comply with the applicable requirements of the

Environmental Protection Agency's National Emission Standards for Hazardous Air Pollutants, Part 51, Chapter 1, Title 40, Code of Federal Regulations, Subpart B, effective April 6, 1973, and as amended October 5, 1975 (Published October 14, 1975, in the Federal Register), and also subpart M published in June 1984.

- J. The Authority will not compensate the Contractor for delays or denials to work when the Contractor is in violation of regulations listed in this contract

### 3.6 INCIDENT REPORTING

- A. All accidents, incidents, and occurrences (as defined by 49 CFR Part 674 Appendix A) shall be reported immediately to MBTA field staff. Contractors shall issue standing orders to all supervisors directly in charge of operations that the scene of the incident shall not be disturbed, except for rescue or other emergency measures, until otherwise directed by MBTA Safety. Contractor's forces either witnessing or party to the incident shall be detained at the site to provide detailed accounting of facts.
- B. The Contractor shall complete the e-Builder incident reporting process within one week following all reported incidents, accidents, and near misses. An extension may be provided by the MBTA Safety Department if extenuating circumstances (i.e., injured employee with an extended hospital stay) prevent the completion of the e-Builder incident reporting process within the one-week deadline.
- C. The Contractor shall be responsible for providing a full incident investigation through the e-Builder process complete with corrective actions, witness statements, photos, etc.
- D. The MBTA Safety Department will provide final approval for all e-Builder incident reporting and reserves the right to request more detailed incident information and require additional corrective actions. If any claim is made by any third person against the Contractor or any subcontractor on account of any incident, the Contractor shall promptly report the fact in writing to the Authority, giving full details of the claim.

### 3.7 WORK AUTHORIZATIONS

- A. Work authorizations must be issued by the MBTA in accordance with all current MBTA policies, programs, and procedures. Work authorizations include, but are not limited to:

1. Excavations/Trenches
2. Hot work
3. Confined space entry
4. Cranes and suspended platforms
5. Work performed by rail-bound equipment on grades 3% or greater

### 3.8 WORKING NEAR THE THIRD RAIL

A. When working on or near the third rail, when the power is off, the contractor must have a third rail high-voltage warning device on the job site approved by the MBTA Power Department. This device will warn work crews if the third rail becomes energized at any time during work activity involving the Right of Way (ROW). The Contractor shall coordinate all work near the third rail with the MBTA Power Department.

#### B. HIGH VOLTAGE REQUIREMENTS

1. Work activities necessitating traction power system (third rail and trolley wire) de-energization will require the services of an MBTA power lineman on site at all times.
2. Anytime a Contractor employee has to enter an electric manhole, the MBTA Power Department must be on site to inspect the condition of the power lines and ensure that power is terminated. All power sources must be covered with fire retardant (FR) blankets by the MBTA.

#### C. EQUIPMENT

1. All rail-bound equipment used by the contractor on MBTA property must be inspected by the MBTA Maintenance of Way Department prior to use on the work site and shall not be used if considered unsafe or not conforming to MBTA specifications.
2. All contractor/subcontractor equipment (including hi-rail) operators must be trained, certified, and properly licensed for each specific piece of equipment they will operate.
3. The contractor/subcontractor must keep a copy of the Manufacturer's Operating Manual or instructions onboard the hi-rail equipment at all times.
4. The contractor/subcontractor hi-rail vehicles must be equipped with an exhaust gas purifier, and the hi-rail equipment shall

comply with requirements of the hi-rail equipment manufacturer. Documentation of same must be readily available and provided to the Authority upon inspection.

5. Contractors are required to comply with any and all Special Orders and Directives issued by the Authority relative to hi-rail vehicle operations.
6. If the contractor/subcontractor equipment is involved in a derailment, near miss, or incident which caused injury or exposed personnel to injury and/or caused damage to Authority property, that equipment is subject to the Authority's Impound Policy/Procedure.
7. Contractor equipment to be used on or in the vicinity of the tracks shall be in first-class condition, so as to positively prevent any failure that would cause delay in Authority operations or damage to its property or compromise the health and safety of personnel working on the project.
8. Equipment shall not be placed or operated within fouling distance (15' from the centerline) of track without first obtaining the permission of the Authority.
9. Heavy Equipment used in tunnel operations must utilize fire resistant hydraulic fluids and conform to OSHA 20 CFR 1926.800 (m)(8), and the Massachusetts Fire Prevention Regulations {527 CMR 1.03 (8)} and the Boston Fire Prevention Code {Section 1.05 (b)}.

#### D. PERSONAL PROTECTIVE EQUIPMENT (PPE)

1. All personnel working on the project site, within the MBTA construction project limits are required to wear an MBTA approved high visibility reflective safety garment, hard hat, safety glasses, and protective footwear at all times. Please refer to the table in Section C for requirements.
2. All Contractor employees working within the MBTA ROW must carry the following with them at all times in accordance with the MBTA ROW Rulebook:
  - a. MBTA Safety approved high visibility garment/vest
  - b. Whistle
  - c. Working flashlight

d. Valid ROW Card

3. All Contractor personnel working in the MBTA ROW or on station platforms will require the use of MBTA flaggers in compliance with all requirements set forth by the MBTA ROW Rulebook.
4. As of February 1, 2023, the PPE and additional MBTA requirements for ROW access listed in the tables below shall be required at all times while on the ROW. The MBTA Chief Safety Officer or designee must approve any exceptions to the below-referenced minimum PPE requirements.

**MBTA MINIMUM PPE REQUIREMENTS ON FTA-REGULATED  
RAPID TRANSIT LINES/LIGHT & HEAVY RAIL OPERATIONS FOR  
PERSONNEL PERFORMING WORK WITHIN THE RIGHT-OF-WAY  
(ROW)**

<b>PPE</b>	<b>MINIMUM REQUIRED PPE TYPE</b>
Hard Hat	OSHA 1910.135, ANSI Z89.1 and NFPA 70E 130.7, Type I, Class E
Safety Eyeglasses	OSHA 1910.133 and ANSI/ISEA Z87.1
Work Boot	OSHA 1910.136, ASTM F-2412-18a & ASTM F-2413-18 Composite Toe, EH-Electrical Hazard Resistant, PR-Puncture Resistant, Slip Resistant, 6-inch, Defined Heel
Upper Body Safety Reflective Garment	ANSI/ISEA 107 High visibility, yellow-green, retro reflective, Class 2, Type R, 5-point breakaway (vest only), "X" stripe pattern on back (MBTA requirement)
Lower Body Safety Garment	Full Length Pants (Cotton or Wool preferred)
<b>ADDITIONAL MBTA REQUIREMENTS</b>	<b>MINIMUM ROW ACCESS REQUIREMENTS</b>



<b>FOR ROW ACCESS</b>	
Right-of-Way (ROW) License	MBTA valid (unexpired) ROW license on person (Employee and Contractor)
Flashlight (Hand- held)	ANSI/NEMA FL 1-2009 LED, Polypropylene industrial construction, 35 Lumens, 45 meters, 100 hours*, Impact & Water resistant
Whistle	High-impact plastic, sharp loud blast, >120dB, 3150 hertz tone preferred

5. Note that the items above are minimum requirements only depending on a specific job function, enhanced PPE and other safety equipment may be required if there is greater potential for injury/illness as indicated by a Job Hazard Analysis (JHA) or Job Safety Analysis (JSA).
6. Until such time that the *Right of Way Safety Rulebook 3rd Edition, Dated July 1, 2014*, and *PPE Safety Program SP19-001, dated May 29, 2019*, are completely revised, the minimum requirements specified in the table above shall supersede all specific PPE requirements referenced in those documents.
7. For the purpose of this Special Order, "Personnel" is inclusive of all employees, contractors, oversight, or other individuals who access the ROW for the purpose of performing work. ROW includes the property over which trains and authorized rail equipment operate, and ten feet from the centerline of track in any direction, including sidings and yards (ROW Safety Rulebook 3rd Edition July 2014). This does not apply to car houses.
8. With the exception of the work boot requirement, the minimum PPE requirements in this Special Order will be effective as of February 1, 2023. Starting on that date, MBTA Personnel shall not enter the ROW without meeting all minimum PPE requirements stated above. This includes the "X" stripe pattern requirement for upper body safety garments. If a winter coat is worn that does not have the "X" strip pattern, a compliant reflective vest shall be worn over it.
9. The work boot requirement will go into effect on March 1, 2023.

### 3.9 HAZARDOUS SUBSTANCES

- A. Any Contractor who uses hazardous substances on the hazardous substances list to which workers might be exposed under either normal work conditions or reasonable foreseeable emergency conditions must provide those workers with the required hazardous substance information.

### 3.10 PROTECTION OF THE PUBLIC

- A. All necessary precautions to prevent injury to the public or damage to property of others shall be taken. The public is defined as all persons not employed by or under contract or subcontract to the MBTA. Installation of temporary barriers and/or fencing designated to protect the public shall be reviewed and approved by the MBTA.

- B. Work shall not be performed in any area occupied by the public unless specifically permitted by the contract or in writing by the MBTA.

### 3.11 SUBSTANCE ABUSE/PREVENTION/TESTING PROGRAM

- A. The Contractor shall establish a substance abuse policy and testing program that includes the following elements:
  - 1. Deterrence
  - 2. Treatment and Rehabilitation
  - 3. Detection
  - 4. Enforcement
- B. The MBTA reserves the right to approve the proposed substance abuse program prior to commencing the contract.
- C. Whenever any of the following conditions occur, the Contractor personnel involved will be required to submit to a drug and alcohol screen:
  - 1. Any event on/or involving MBTA property or personnel that results in a fatality
  - 2. Any personal injury to a Contractor employee, or member of the public which requires or should reasonably require medical attention
  - 3. Any event causing significant or unusual property damage, as determined by an MBTA official.
  - 4. Any event which appears to involve a violation of MBTA rules which poses a safety threat to employees or members of the public. The employees in these situations must be tested unless at the time of the accident/incident the employee's performance can be completely discounted as a contributing factor to the accident/incident. The drug and alcohol screen should be completed immediately, but absent unusual circumstances, not more than eight (8) hours after the accident/incident in question occurred.
  - 5. In the event of hospitalization and unless medically precluded, a drug and alcohol screen shall be ordered at the treatment facility if treatment is expected to exceed eight (8) hours. This screen will be identical to that utilized in probable cause.

### 3.12 FRA 219 Plan **(This requirement is for any project that occurs within the MBTA 's Commuter Rail Territory.)**

- A. Contractor and its Subcontractors will comply with the requirements of 49 CFR Part 219. Contractor and its Subcontractors also must comply with MBTA and Commuter Rail Operator requirements relating to control of alcohol and drug use, including by (a) providing to the MBTA copies of their drug and alcohol plans submitted to the Federal Railroad Administration (“FRA”) as applicable, and (b) providing the MBTA and the Commuter Rail Operator with copies of any FRA Acceptance letters along with certifications from Contractor and its Subcontractors that their plans are in compliance with the requirements of 49 CFR Part 219. Contractor and its Subcontractors will be prohibited from performing work until they are in compliance with the requirements of 49 CFR Part 219. Any delays related to failure to comply with these requirements will be considered a non-excused delay under the Contract.
- B. FRA Approved Drug & Alcohol Plans as well as FRA Approval Letter must be submitted by contractors in compliance with Section 1.2 of Spec Section 01568.
- C. Changes made to the Drug & Alcohol Plans must be approved by the FRA. The revised 49 CFR 219 plan must be submitted prior to the revised plan going into effect.
- D. Any subcontractors must submit FRA Approved Drug & Alcohol Plans as well as FRA Approval Letter via e-Builder in accordance with the Subcontractor Acceptance Request process in Specification Section 01300- Submittals. If the Subcontractor is covered under the Contractor’s 219 plan, this must be noted in the Contractor’s plan. A letter providing evidence of coverage under the Contractor’s plan must be included with the submittal.
- E. In addition, contractors must submit quarterly updates of their testing activities. The quarterly report must include the following:
  - 1. Number of people in contractors testing pool
  - 2. Number of tests conducted per test type
    - a. Post-Accident/Incident
    - b. Random Selection
    - c. Reasonable Suspicion
    - d. Follow Up Test
    - e. Pre-Employment
    - f. Return to Work
  - 3. Number of Positive Results per test type
  - 4. Number of Diluted Results per test type
  - 5. Any other related Management Information System (MIS) data

### 3.13 CONDUCT OF TOURS

- A. Group tours must be cleared through the MBTA, allowing maximum advance notice and in compliance with MBTA Policy and Procedures.
- B. MBTA will coordinate the tour arrangements and ensure notification to the Contractors Project Manager.

### 3.14 HOUSEKEEPING

- A. Contractors are expected to maintain good housekeeping on their job sites.
- B. During the course of construction, work areas, passageways and stairs, in and around buildings and structures, shall be kept clear of debris. Construction materials shall be stored in an orderly manner. Storage areas and walkways on the site shall be maintained free of depressions, obstructions and debris.

## **PART 4 - MEASUREMENT AND PAYMENT**

- A. No separate measurement or payment will be made for work required under this Section.

## **END OF SECTION**



# Massachusetts Bay Transportation Authority

## ***RAILROAD OPERATIONS DIRECTORATE***



## **MBTA COMMUTER RAIL CONSTRUCTION SAFETY DIRECTIVE**

Issued by: Ryan D. Coholan, Chief Railroad  
Officer

August 12, 2022



Charles D. Baker, Governor  
Karyn E. Polito, Lieutenant Governor  
Jamey Tesler, MassDOT Secretary & CEO  
Steve Poftak, General Manager



## RAILROAD OPERATIONS CONSTRUCTION DIRECTIVE

**To:** Distribution

**From:** Ryan D. Coholan<sup>DS</sup>  
Chief Railroad Officer

**Date:** August 12, 2022

**RE:** MBTA Commuter Rail Construction Safety Directive

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This directive is intended to provide clarity, guidance, and consistency for Contractors, Subcontractors, Vendors, and other entities performing services or work on or around MBTA right-of-way.

In the event that conditions warrant deviation from this directive, a waiver signed by the MBTA Railroad Operations Directorate, MBTA Commuter Rail Safety, and the department owning the scope of work will be required of the project. Should the Contractor not comply with the restrictions of the waiver, the waiver becomes null and void.

All workers shall comply with standards as prescribed by Code. MBTA Standards shall apply only where Code does not address a topic or the MBTA requires a standard above and beyond Code. The more stringent shall always apply.

**Failure to comply with any of the following sections, regardless of the level of noncompliance, can result in restriction from property at the discretion of MBTA Railroad Operations and further consequences, not subject to any claim action or dispute from the Contractor. The judgment of MBTA Railroad Operations in such cases, in consultation with MBTA Commuter Rail Safety, shall in all cases be final.**

### OBJECTIVE

The objective of this directive is to require that all projects take the necessary measures to protect existing MBTA infrastructure and to effectively identify and mitigate potential hazards before they create unsafe conditions, inflict damage, and/or cause impacts to service. This directive is also intended to identify documentation that may be

Massachusetts Bay Transportation  
Authority  
Ten Park Plaza, Boston, MA 02116



required for reporting purposes.

## CODES, STANDARDS, POLICIES, REFERENCES, AND GUIDELINES

The direction provided herein shall be used in coordination with all other documented MBTA Standards and Guidelines as well as all applicable codes, policies and procedures. In the event conflicting guidance is provided, the more stringent direction shall be followed, and be documented as such.

Relevant codes, standards, and policies include but are not limited to:

- MBTA Railroad Operations Directorate
- MBTA Railroad System Safety Program
- MBTA Section 01520 Procedure for Work Vehicles
- MBTA Section 01568 Construction Safety
- MBTA Capital Delivery Transit-Oriented Development Group Design/Construction Review for Projects within the MBTA's Zone of Influence: A Guide for Owners, Developers, and Contractors (ODCs)
- 49 CFR 214 Railroad Workplace Safety
- 49 CFR 219 National Drug Screening
- 49 CFR 225 Railroad Accidents/Incidents: Reports Classification and Investigations

## APPLICABILITY

This directive applies to Contractors, Subcontractors, Vendors, and other entities performing services or work on or around MBTA right-of-way. This includes **work on or around both active and inactive railroad right-of-way**, unless otherwise determined during MBTA review of a Contractor's Work Plan and Safety and Health Plan.

**This directive applies to all entities performing services or work on or around the MBTA right-of-way, such as:**

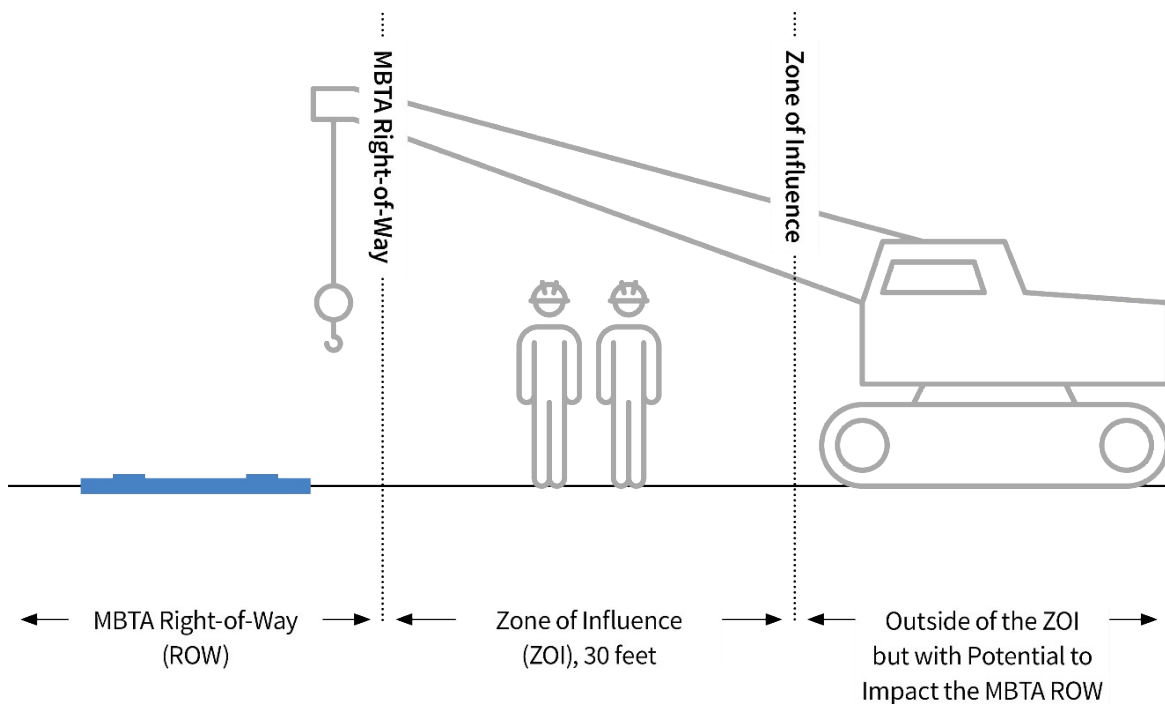
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|--|--|
| <input checked="" type="checkbox"/> Contractors    | <input checked="" type="checkbox"/> Vendors        |
| <input checked="" type="checkbox"/> Subcontractors | <input checked="" type="checkbox"/> Other Entities |

**Work on or around MBTA right-of-way** includes any activities in air-rights, on, adjacent to, or in close proximity (30-foot horizontal-plan dimension from proposed work zone limit to MBTA property line) to existing MBTA property, facilities, and/or with the potential to endanger, impact, or obstruct the operational right-of-way.<sup>1</sup> The

following graphic provides an example of workers within the Zone of Influence, and equipment placed outside of the Zone of Influence with the potential to impact the operational right-of-way.

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<sup>1</sup> For additional guidance related to process requirements associated with this “Zone of Influence”, please refer to the MBTA’s *Design/Construction Review for Projects within the MBTA’s Zone of Influence: A Guide for Owners, Developers, and Contractors (ODCs)*.



## REQUIREMENTS

### Compliance and Documentation of Personnel Qualifications

Each Contractor is responsible for documenting compliance with applicable codes and standards. The Contractor is responsible for the adequacy of their documentation and records, which can be audited at any time. The Contractor shall follow their plan in place. Failure to comply can result in restriction from property and further consequences, not subject to any claim action from the Contractor.





#### *Initial Preparation for Documenting Compliance*

##### **Key Considerations**

*Contractor must:*

- ☑ Develop an MBTA approved **work plan**.
- ☑ Assign an MBTA-approved **railroad-qualified Safety Supervisor** prior to starting work.
- ☑ Document any applicable **certifications, qualifications, and licenses** for all individuals working on a project.

The Contractor shall have an MBTA Railroad Operations and MBTA Commuter Rail Safety approved work plan. At a minimum, the approved work plan should include but is not limited to the following contents:

			
<b>Step-by-step construction sequence,</b> including steps taken before, during, and after work on or around the right-of-way	<b>Description of access points</b> to the right-of-way, including railroad protection and any license of entry where required <sup>1</sup>	<b>Schedule</b> of when work will be conducted on or around the right-of-way, including for steps taken after construction is completed <sup>2</sup>	<b>Job hazard analysis</b> to identify potential hazards and recommend actions or procedures to mitigate them, including additional job-specific training

**Notes:**

- 1. A license of entry must be secured with Amtrak prior to entry on any ROW operated by Amtrak.*
- 2. The schedule should include activities after construction is completed, such as testing and commissioning for track, signal, and communications upon completion of work following the procedures of the Operating Railroad required to return the railroad to unimpeded, unrestricted operations.*

Depending on the scope of the work, the project should anticipate and account for impacts to adjacent services, as the work may impact adjacent lines and tracks.

MBTA Railroad Operations and MBTA Commuter Rail Safety reserve the right to require additional information at their discretion.

Prior to the start of work on a project, the Contractor must assign an MBTA-approved railroad-qualified safety professional to supervise the project. Section 1.2.D of Spec Section 01568 details requirements for the Safety Supervisor. The Safety Supervisor will have the following responsibilities:

- Provide safety oversight for the project.
- Serve as a point of contact to the MBTA to provide updates and answer any questions about project safety.

The Contractor must also document for each individual working on a project on or around MBTA right of way:

- Copies of roadway worker protection (RWP) training certification.
- Copies of other qualifications and certifications applicable to the work performed.
- Copies of qualifications, certifications, and licenses as applicable to use any operating equipment or machinery that

will be used on the work site. This may include driver's license, hoisting license and medical certificate.

For bridge work, the Contractor shall document compliance with FRA regulations on bridge worker safety and fall protection.

The Contractor should also have an FRA approved drug and alcohol plan, as detailed in the subsequent section on Compliance with 49 CFR Part 219.

### *Daily Verification*

#### **Key Considerations**

*Contractor must:*

- ☑ Maintain a **list of all individuals** working on MBTA property.
- ☑ Document that all workers have **proper PPE and certification**.
- ☑ Document that all workers have **participated in and acknowledged the project briefing** before starting each shift.
- ☑ Require all workers to **carry their RWP notebook** on their person.
- ☑ Have their **work plan available** on site.

The project staff must maintain a list of Contractors and Subcontractors working on MBTA property.

Prior to starting each shift, the Contractor must document the following information for each roadway worker working on the project site or on or around MBTA right-of-way:

- The roadway worker has the proper PPE
- The roadway worker has a valid, non-expired RWP training certification card
- The roadway worker has participated in a job briefing and verbally acknowledged understanding of the foul zone and level of protection – no person shall enter the railroad envelope without a job briefing
- Any roadway worker operating equipment or machinery must have valid, non-expired certification and licenses as applicable to operate that equipment or machinery. This may include driver's license, hoisting license and medical certificate.

Documentation shall be provided to MBTA Railroad Operations and MBTA Commuter Rail Safety on request. The MBTA reserves the right to examine operators to determine their fitness.

Each roadway worker shall carry their RWP notebook while on the project site or while on or around the MBTA right-of-way.

The Contractor shall have their MBTA Railroad Operations and MBTA Commuter Rail Safety approved work plan on site, which they must display to MBTA Railroad Operations and MBTA Commuter Rail Safety as applicable or on request in the field.



## *Compliance with 49 CFR Part 219*

### **Key Considerations**

*Contractors must provide the MBTA with:*

- ✓ **FRA-approved drug and alcohol plan.**
- ✓ **Certifications that plans comply** with 49 CFR Part 219.
- ✓ **FRA acceptance letters.**
- ✓ **Quarterly updates** of testing activities.

All Contractor, Subcontractors, and Consultants performing work must comply with the requirements of 49 CFR Part 219, as detailed in Section 3.12 of Spec Section 01568. This includes, but is not limited to:

- Providing the MBTA with copies of FRA-approved drug and alcohol plans, which must include an on-call testing facility that is available 24-hours per day, 7-days per week.
- Providing the MBTA and the commuter rail operator with copies of FRA Acceptance letters and certifications from Contractor and Subcontractors that plans are in compliance with the requirements of 49 CFR Part 219
- Providing updates of testing activities per Section 3.12 of Spec Section 01568 every quarter or as requested by the MBTA.

Absent hospitalization or unusual circumstances, any individual required to submit to a drug and alcohol screen must do so at an on-call testing facility included in the Contractor or Subcontractor's FRA-approved drug and alcohol plan.

All project reporting related to 49 CFR Part 219 must be provided to the MBTA Capital Project Team overseeing the project.

## Compliance and Documentation of Equipment Operations

### Key Considerations

*Contractors must:*

- ☑ **Obtain permission** to place and operate equipment adjacent to a track.
- ☑ **Inspect equipment daily** prior to use.
- ☑ Ensure that all equipment operators are **properly certified and licensed**.
- ☑ Comply with **additional requirements related to hi-rail equipment**.
- ☑ **Notify the MBTA** at least 2 days prior to bringing hoisting equipment onto MBTA property.

Each Contractor is responsible for documenting compliance with applicable codes and standards. The Contractor is responsible for the adequacy of their documentation and records, which can be audited at any time. The Contractor shall follow their plan in place. Failure to comply can result in restriction from property and further consequences, not subject to any claim action from the Contractor.

All equipment used on MBTA Railroad Property may be inspected by the MBTA and shall not be used if considered unsatisfactory. Equipment shall not be placed or put into operation adjacent to a track without first obtaining the permission. The Contractor must ensure and document that all equipment has been properly inspected prior to use each day.

Additional requirements related to hi-rail equipment include:

- Hi-rail equipment shall pass a run test in the areas it will be utilized to the satisfaction of the MBTA before it can be used for work. Subsequent to passing the required tests, the equipment shall receive certification. Only certified equipment shall be allowed to operate.
- Hi-rail equipment must be inspected by the equipment operator for compliance with 49 CFR Part 214.527 prior to using the machine at the start of the operator's work shift.
- Hi-rail gear shall include adjustable flanged wheels which can be engaged with standard "T" track. Wheels shall be capable of being mechanically locked in the rail operating position.
- The hi-rail gear of all hi-rail equipment shall be inspected for safety at least annually.

Please see Section 1.5 of Spec Section 01520 for further guidance and requirements related to hi-rail equipment.

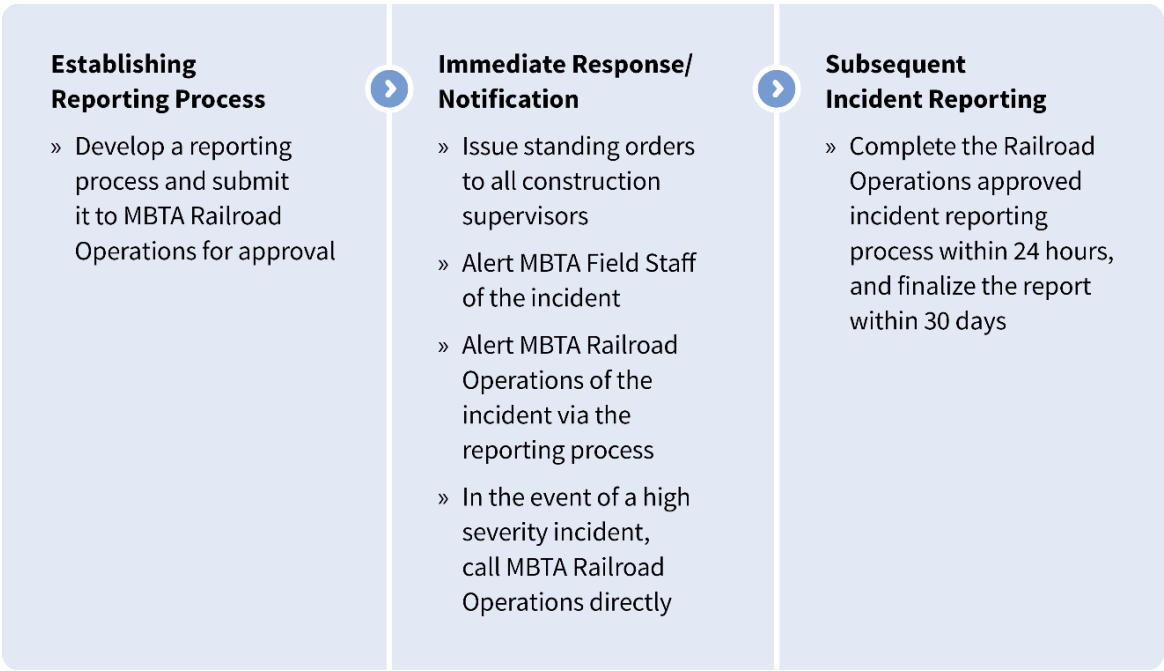
The Contractor shall notify the MBTA at least two (2) days prior to bringing in any hoisting equipment on the Authority's property, including but not limited to cranes. Section 3.5.F of Spec Section 01568 and the MBTA Railroad Operations Directorate detail additional requirements related to hoisting.

Only railroad-qualified employees may move equipment across grade crossings, unless sufficient on-ground protection is established and approved by MBTA Railroad Operations and MBTA Commuter Rail Safety.

As described in the section on compliance and documentation of personnel qualifications, operators of all equipment must be properly licensed and may be examined by the MBTA.

Incident Reporting

Contractors must report incidents when safety-related events occur. Failure to comply can result in restriction from property and further consequences, not subject to any claim action from the Contractor. This section describes some of the Contractor requirements for establishing the reporting process, immediate response and notification, and subsequent incident reporting (including 24-hour reporting and 30-day reporting), as summarized in the graphic below and following subsections.



Establishing Reporting Process

At the onset of a project, the Contractor must establish a reporting process. The process can be completed through a system of the

Contractor's choosing, which must be approved in advance by MBTA Railroad Operations and MBTA Commuter Rail Safety. All information needed by MBTA Railroad Operations and MBTA Commuter Rail Safety as described in the following sections must be provided within the Contractor's process.

The Contractor's reporting process shall categorize safety incidents based on the MBTA Railroad Operations and MBTA Commuter Rail Safety definition of event severity.

Safety-related incidents can be classified on a scale of severity from 4 to 1, with incidents with a rating of 1 classified as the most severe. The following table provides a framework for assigning each incident with a severity rating.

Injury and/or Property Damage Type	Collision/Non-Collision and Operating Impact		
	Collision	Non-Collision Impacting Operations	Non-Collision Not Impacting Operations
Fatality or Serious Injury	1	1	1
Non-Serious Injury	1	2	2
Property Damage	1	2	3
Other (e.g., Near Miss, Safety Violation, Equipment Failure)	1	2	4

**Notes:**

1. Ratings are from 1 to 4, with 1 representing the most severe and 4 representing the least severe.
2. Incident severity should be classified according to the most severe component (e.g., a non-collision incident impacting operations that causes both a fatality and non-serious injuries would be classified as a 1).
3. Per 49 CFR §229.5, "serious injury means an injury that results in the amputation of any appendage, the loss of sight in an eye, the fracture of a bone, or confinement in a hospital for a period of more than 24 consecutive hours.
4. A non-serious injury is defined as an injury that does not meet the criteria for a serious injury as defined above.
5. Property damage may include damage to either railroad property or non-railroad (public or private) property. Property may include equipment and other non-permanent items.

As part of the reporting process, the Contractor must also develop a project-specific list of personnel to be contacted for each level of incident severity, to be approved by MBTA Railroad Operations and MBTA Commuter Rail Safety.

***Immediate Response/Notification***

All safety-related events are to be reported immediately to MBTA field staff. Contractors shall issue standing orders to all construction supervisors directly in charge of construction operations that the scene of the incident shall not be disturbed, except for rescue or other emergency measures, until otherwise directed by MBTA Railroad

Operations and MBTA Commuter Rail Safety. Contractor's forces either witnessing or party to the incident shall be detained at the site to provide detailed accounting of facts.

In the event of a safety-related incident, the Contractor, MBTA Field Staff, and the Operating Railroad shall then alert MBTA Railroad Operations and MBTA Commuter Rail Safety via the process approved in advance by MBTA Railroad Operations and MBTA Commuter Rail Safety.

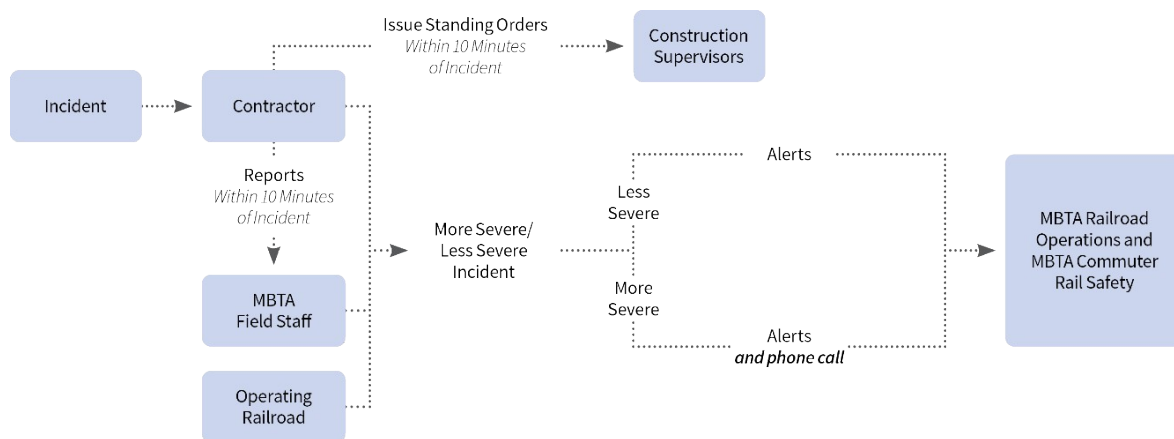
This process will require the input of basic information about the incident:

- Issue
- Severity
- When (Date and Time)
- Location
- Impact
- Equipment
- Response

Based on the severity ranking of the incident, the process shall either require calls to all necessary personnel (most severe) or emails to all necessary personnel (less severe).

Notified MBTA Railroad Operations and MBTA Commuter Rail Safety personnel shall be required to acknowledge that they have received the report. Additionally for events categorized as most severe, the Contractor and the Operating Railroad shall directly call MBTA Railroad Operations and MBTA Commuter Rail Safety.

The following graphic illustrates the immediate notification process.



### *Subsequent Incident Reporting*

The Contractor shall begin the MBTA Railroad Operations and MBTA Commuter Rail Safety approved incident reporting process within 24 hours following all safety related incidents, and must finalize the report within 30 days. Extensions can be provided by the MBTA Railroad Operations and MBTA Commuter Rail Safety in the event of extenuating circumstances. Additionally, the Contractor will provide any additional information or revisions requested by MBTA Railroad Operations, MBTA Commuter Rail Safety, and MBTA Construction Safety. The following page provides requirements for the 24-hour report and the 30-day report.



**24-hour reports must contain the following information:**

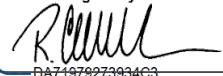
- ☒ Project name
- ☒ Date and time of incident
- ☒ Location of incident
- ☒ Type of incident
- ☒ Weather
- ☒ Reported to outside agency (yes/no)
- ☒ Investigator completing report
- ☒ A summary of incident
- ☒ Fatalities
- ☒ Injuries
- ☒ Delay to trains
- ☒ Damage to infrastructure or equipment
- ☒ Who was involved:
  - ☒ Name
  - ☒ Position
  - ☒ Drug and alcohol test completed (yes/no)
  - ☒ Employee removed from service (yes/no)
- ☒ What was involved (equipment, infrastructure, etc.)
- ☒ Investigation contacts and contact phone number
- ☒ Statements from those involved and witnesses
- ☒ Job briefing document
- ☒ Photos
- ☒ Copy of RWP card(s)

**30-day reports must contain all information included in 24-hour reports, in addition to the following information:**

- ☒ Any documentation submitted to external agency (OSHA, FRA, etc.)
- ☒ Documentation of any violations or notices received from external agency related to incident (FRA, OSHA, etc.)
- ☒ Documentation of damage and damage costs
- ☒ Any rules violated
- ☒ Details of the investigation, including findings on:
  - ☒ Root cause
  - ☒ Contributing factors
  - ☒ Conclusions
- ☒ Recommendations and corrective actions
- ☒ Training documentation

The MBTA and its Railroad Operations Directorate is fully committed to the safety of our passengers, employees, contractors, and stakeholders. This document was drafted based on “real-world” incidents, and lessons learned while investigating incidents and events. It establishes a recognized baseline of how work should be done in an active railroad environment. Nothing in this document should be interpreted as removing ultimate responsibility for individual actions from the individual. We urge people who work upon our property to always take the safest course, and to challenge in good faith any unsafe behavior or actions.

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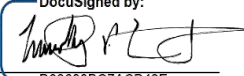
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Chief Railroad  
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